

CHAPTER 30

Fiscal Policy, Deficits, and Debt

Over the years, the most serious macroeconomic problems have been those resulting from the swings of the business cycle. Learning what determines the equilibrium level of real output and prices in an economy and what causes them to fluctuate makes it possible to find ways to achieve maximum output, full employment, and stable prices. In short, macroeconomic principles can suggest policies to control both recession and inflation in an economy.

As you will discover in Chapter 30, the Federal government may use **fiscal policy**, changes in government spending or taxation, to influence the economy's output, employment, and price level. The chapter first discusses discretionary fiscal policy to show how it affects aggregate demand. **Expansionary fiscal policy** is used to stimulate the economy and pull it out of a slump or recession by increasing government spending, decreasing taxes, or some combination of the two. **Contractionary fiscal policy** is enacted to counter inflationary pressure in the economy by cutting government spending, raising taxes, or a combination of the two.

Discretionary fiscal policy requires that Congress take action to change tax rates, transfer payment programs, or purchase goods and services. **Nondiscretionary fiscal policy** does not require Congress to take any action and is a **built-in stabilizer** for the economy. The economy has a progressive tax system that provides such automatic or built-in stability. When GDP increases, net tax revenues will increase to reduce inflationary pressure and when GDP declines, net tax revenues will fall to stimulate the economy.

To evaluate the direction of fiscal policy requires understanding of the **standardized budget** and the distinction between a **cyclical deficit** and a **standardized deficit**. This budget analysis enables economists to determine whether Federal fiscal policy is expansionary, contractionary, or neutral, and to determine what policy should be enacted to improve the economy's economic performance. From this budget analysis you will gain insights into the course of U.S. fiscal policy in recent years.

Fiscal policy is not without its problems, criticisms, or complications. There are timing problems in getting it implemented. There are political considerations in getting it accepted by politicians and voters. If the fiscal policy is temporary rather than permanent it is thought to be less effective. Some economists criticize the borrowing of money by the Federal government for expansionary fiscal policy because they think it will raise interest rates and crowd out investment spending, thus reducing the policy

effects. The debate over the value of fiscal policy is an ongoing one as you will learn from the chapter.

Any budget surplus or deficit from a change in fiscal policy affects the size of the **public debt** (often called the national debt). Over the years the United States accumulated a public debt that now totals slightly more than \$9 trillion. This debt increased because budget deficits accumulate over time and are not offset by budget surpluses. The size of the public debt is placed into perspective by: (1) describing who owns the debt; (2) comparing it (and interest payments on the debt) to the size of the economy (GDP); and (3) looking at the sizes of the public debt in other industrial nations.

The last sections of the chapter examine the economic implications or **consequences of the public debt**. These economic problems do not include bankrupting the Federal government because the government can meet its obligations by refinancing and taxation. Nor does the public debt simply shift the economic burden to future generations because the public debt is a public credit for the many people who hold that debt in the form of U.S. securities. Rather, the public debt and payment of interest on the debt contribute to important problems: increased inequality in income, reduced incentives for work and production, decreased standard of living when part of the debt is paid to foreigners, and the possible crowding out of private investment.

■ CHECKLIST

When you have studied this chapter you should be able to

- ☐ Distinguish between discretionary and nondiscretionary fiscal policy.
- ☐ Explain expansionary fiscal policy on aggregate demand when the price level is inflexible downward.
- ☐ Compare and contrast an expansionary fiscal policy through increased government spending or decreased taxation.
- ☐ Describe contractionary fiscal policy on aggregate demand when the price level is inflexible downward.
- ☐ Compare and contrast a contractionary fiscal policy through decreased government spending or increased taxation.
- ☐ Assess whether it is preferable to use government spending or taxes to counter recession and reduce inflation.
- ☐ Explain the relationship between net tax revenues and GDP.

- ☐ Describe automatic or built-in stabilizers and their economic importance.
- ☐ Indicate how the built-in stabilizers help to counter recession and inflation.
- ☐ Describe how automatic stabilizers are affected by different tax systems (progressive, proportional, and regressive).
- ☐ Distinguish between the actual budget and the standardized budget for evaluating discretionary fiscal policy.
- ☐ Describe recent U.S. fiscal policy using the standardized budget.
- ☐ Describe projections for U.S. budget deficits and surpluses.
- ☐ Use the standardized budget to evaluate discretionary fiscal policy.
- ☐ Explain how Social Security affects the size of the federal budget.
- ☐ Outline three timing problems that may arise with fiscal policy.
- ☐ Discuss the political considerations affecting fiscal policy.
- ☐ Explain how expectations of policy reversals in the future change the effectiveness of fiscal policy.
- ☐ Describe how changes in state and local finances may offset fiscal policy at the federal level.
- ☐ Explain the crowding-out effect of fiscal policy.
- ☐ Identify when the crowding-out effect is or is not likely to be a problem.
- ☐ Discuss current thinking on fiscal policy.
- ☐ Explain the relationship of budget deficits and surpluses to the public debt.
- ☐ List the major types of owners of the public debt.
- ☐ Compare the size of the public debt to GDP.
- ☐ Compare interest payments on the public debt to GDP.
- ☐ Compare the U.S. public debt with those of other industrial nations.
- ☐ State two reasons why a large public debt will not bankrupt the federal government.
- ☐ Discuss whether the public debt imposes a burden on future generations.
- ☐ State the effect of the public debt on income distribution.
- ☐ Explain how the public debt affects incentives.
- ☐ Evaluate the differences between foreign and domestic ownership of the public debt.
- ☐ Describe the crowding-out effect from a public debt.
- ☐ State two factors that offset the crowding-out effect of a public debt.
- ☐ List the 10 items in the index of leading economic indicators (Last Word).

■ CHAPTER OUTLINE

1. **Fiscal policy** consists of the changes made by the Federal government in its budget expenditures and tax revenues to expand or contract the economy. In making these changes, the Federal government may seek to increase the economy's real output and employment, or control its rate of inflation.

2. Fiscal policy is **discretionary** when changes in government spending or taxation are designed to change the level of real GDP, employment, incomes, or the price level. The **Council of Economic Advisers (CEA)** advises the U.S. president on such policies. Specific action then needs to be taken by Congress to initiate this discretionary policy, in contrast to **nondiscretionary** fiscal policy that occurs automatically (see item 3).

a. **Expansionary fiscal policy** is generally used to counteract the negative economic effects of a recession or cyclical downturn in the economy (a decline in real GDP and rising unemployment). The purpose of the policy is to stimulate the economy by increasing aggregate demand. The policy will create a **budget deficit** (government spending greater than tax revenues) if the budget was in balance before the policy was enacted. Assume the price level is fixed. There are three options for increasing aggregate demand:

(1) The government can increase its discretionary spending. The initial increase from this spending will be increased by the multiplier effect. Since the price level is fixed, real output will rise by the full extent of the multiplier effect.

(2) Another option would be for the government to reduce taxes. Some of the tax cut would be saved, but some of it would be spent. The spent portion would provide an initial stimulus to the economy that would be magnified by the full extent of the multiplier effect since the price level is fixed.

(3) The government may decide to use some combination of increased government spending and tax reductions to increase aggregate demand.

b. **Contractionary fiscal policy** is a restrictive form of fiscal policy generally used to correct an inflation gap. Assume that the economy is at a full-employment level of output. If aggregate demand increases (shifts rightward), it will increase output and at the same time pull up output prices creating demand-pull inflation. If government does nothing, input prices will rise in the long run to match the increase in output prices, creating more inflation. The purpose of contractionary fiscal policy is to reduce aggregate demand pressures that increase the price level. If the government budget is balanced before the policy is enacted, it will create a **budget surplus** (tax revenues are greater than government spending). The contractionary effect on the economy from the initial reduction in spending from the policy will be reinforced by the multiplier effect. Three policy options are used, but account should be taken of the ratchet effect (the price level is inflexible downward).

(1) The government can decrease spending. If the price level is fixed because of the ratchet effect, the multiplier will have a full effect in decreasing output, but there will be no change in the price level. Government policy will have to take into account this ratchet effect to calibrate the decline in aggregate demand so it does not cause a recession.

(2) The government can increase taxes. The amount of the tax increase will need to be greater than a decrease in government spending because some of the tax increase will reduce saving, and not just consumption.

(3). The government can use some combination of decreased government spending and increased taxes to reduce aggregate demand.

c. Whether government purchases or taxes should be altered to reduce recession and control inflation depends on whether an expansion or a contraction of the public sector is desired.

3. In the U.S. economy there are automatic or **built-in stabilizers** that serve as nondiscretionary or passive fiscal policy. Such stabilizers work through net tax revenues (tax revenues minus government transfer payments and subsidies). These net tax revenues automatically or passively increase as the GDP rises and automatically or passively decrease as the GDP falls.

a. The economic importance of this net tax system is that it serves as a built-in stabilizer of the economy. On the one hand, it reduces purchasing power during periods of prosperity to counteract increases in aggregate demand that can contribute to demand-pull inflation. On the other hand it expands purchasing power (after tax income) during periods of declining output and high employment.

b. The degree of built-in stability in the economy depends on the responsiveness of net tax revenues to changes in GDP. As GDP increases, the average tax rates will increase in a **progressive tax system**, remain constant in a **proportional tax system**, and decrease in a **regressive tax system**. Thus, there is more built-in stability or net tax responsiveness for the economy in progressive tax systems. Built-in stabilizers, however, can only reduce and cannot eliminate economic fluctuations, so discretionary fiscal policy or monetary policy may be needed to moderate large fluctuations in the business cycle.

4. To evaluate the direction of discretionary fiscal policy, adjustments need to be made to the actual budget deficits or surpluses.

a. The **standardized budget** is a better index than the actual budget of the direction of government fiscal policy because it indicates what the Federal budget deficit or surplus would be if the economy were to operate at full employment. In the case of a budget deficit, the standardized budget

(1) removes the **cyclical deficit** that is produced by a decline in real GDP because of a downturn in the business cycle, and

(2) reveals the size of the **standardized deficit**, indicating how expansionary the fiscal policy was that year if the economy had achieved its potential level of GDP.

b. Recent data on **standardized budget deficits or surpluses** show the years that fiscal policy was expansionary or contractionary. From 1993–1998 deficits declined and from 1999–2000 surpluses increased, so fiscal policy was contractionary. From 2000–2003 surpluses decreased and deficits increased, so fiscal policy was expansionary. From 2003–2007 deficits declined, so fiscal policy was contractionary.

c. Figure 30.5 in the text shows past changes in U.S. budget deficits and surpluses. It also shows projec-

tions, but these can change with changes in fiscal policy and economic growth.

d. The **Social Security** trust fund is a “pay-as-you-go” system that taxes payroll income and uses the money to pay for mandated benefits to retirees and others. The trust fund currently generates more tax revenue than expenditures for the federal government. This surplus in the Social Security trust fund decreases Federal budget deficits and increases Federal budget surpluses.

5. Certain **problems, criticisms, and complications** arise in enacting and applying fiscal policy.

a. There will be problems of **timing**. First, it takes time to recognize the need for fiscal policy because it takes time for data to be collected that provide strong evidence of downturns or upturns in the business cycles. Second, it takes time for the U.S. president and U.S. Congress to take the appropriate administrative and legislative actions to respond to a recognized problem. Third, there is the need for time for the policy to become operational and take the desired effect on output or inflation.

b. There may be **political considerations** with fiscal policy that counter the economic effects. Elected officials may cause a **political business cycle** if they lower taxes and increase spending before an election to stimulate the economy and then do the opposite after an election.

c. Fiscal policy may be less effective if people expect it to be reversed in the future, thus making the policy temporary rather than permanent.

d. The fiscal policies of state and local governments can run counter to Federal fiscal policy and offset it (for example, state and local fiscal policy can be contractionary while Federal fiscal policy is expansionary).

e. An expansionary fiscal policy may, by raising the level of interest rates in the economy, reduce investment spending and weaken the effect of the policy on real GDP. The extent of this **crowding-out effect** depends on the condition of the economy. The crowding-out effect is likely to be relatively small when the economy is in a recession and experiences slack investment demand. It is likely to be more serious when the economy is near full employment because the public demand for money to finance government competes with the private demand for money to fund economic investments.

f. Current thinking about discretionary fiscal policy shows differing perspectives. Some economists think that fiscal policy is ineffective because of all the potential problems and complications. They recommend the use of monetary policy to guide the economy. Other economists think that fiscal policy can be useful for directing the economy and that it can reinforce or support monetary policy. There is general agreement, however, that fiscal policy should be designed so that its incentives and investments strengthen long-term productivity and economic growth.

6. The **public debt** at any time is the sum of the Federal government's previous annual deficits, minus any annual surpluses. In 2007 the total public debt was slightly more than \$9 trillion.

- a. The public debt is owned by various holders of **U.S. securities** (financial instruments issued by the U.S. government to borrow money, such as U.S. Treasury bills, notes, and bonds). About half (53%) of the public debt is held by Federal government agencies (44%) and the Federal Reserve (9%). The other half (47%) is owned by a "public" that includes U.S. individuals (7%), U.S. banks and financial institutions (8%), foreigners (25%), and others such as state and local governments (7%).
- b. It is better to consider the size of the debt as a percentage of the economy's GDP than the absolute amount because the percentage shows the capacity of the economy to handle the debt. The percentage in 2007 (30.6%) was well below that of the 1990s.
- c. Many industrial nations have public debts as a percentage of GDP that are greater than that of the United States.
- d. Interest payments as a percentage of the economy's GDP reflect the level of taxation (average tax rate) required to pay interest on the public debt. The percentage in 2007 (1.7%) was down from previous years.

7. The **false contentions** about a large debt are that it will eventually bankrupt the government and that borrowing to finance expenditures passes the cost on to future generations.

- a. The debt *cannot bankrupt* the government because the government can refinance it by selling new bonds and using the proceeds to pay existing bondholders. It also has the constitutional authority to levy taxes to pay the debt.
- b. The burden of the debt *cannot be shifted to future generations* because U.S. citizens and institutions hold most of the debt. Repayment of any portion of the principal and the payment of interest on it do not reduce the wealth or purchasing power in the United States because it would be paid to U.S. citizens and institutions. The only exception is the payment of the part of debt that would go to foreign owners of the debt.

8. The public debt does create **real and potential problems** in the economy.

- a. The payment of interest on the debt probably increases *income inequality* because this payment typically goes to wealthier individuals.
 - b. The payment of taxes to finance these interest payments may *reduce incentives* to bear risks, to innovate, to invest, and to save, and therefore slow economic growth in the economy.
 - c. The portion of the debt held by foreign citizens and institutions (the **external public debt**) requires the repayment of principal and the payment of interest to foreign citizens and institutions. This repayment would *transfer to foreigners* a part of the real output of the U.S. economy.
 - d. An increase in government spending may impose a burden on future generations by *crowding out* private investment spending, and thus reducing the future stock of capital goods.
- (1) If government spending is financed by increased public debt, the increased borrowing of the Federal

government will raise interest rates and reduce private investment spending. Future generations will inherit a smaller stock of capital goods.

(2) The burden imposed on future generations is lessened if the increase in government expenditures is for worthwhile **public investments** that increase the productive capacity of the economy. This public investment also can complement and stimulate private investment spending that increases the future capital stock.

9. (Last Word) The index of leading economic indicators consists of 10 economic variables: the average length of the work week; initial claims for unemployment insurance; new orders for consumer goods; on-time performance of vendors; new orders for capital goods; building permits for houses; stock prices; the money supply; spread in interest rates; and consumer expectations. The index is used to provide clues or indications about the future direction of the economy, but it is not a precise measure and can be misleading at times.

HINTS AND TIPS

1. Fiscal policy is a broad concept that covers several kinds of policies. The main difference is between discretionary and nondiscretionary fiscal policies. Discretionary fiscal policy is active and means that Congress has taken specific actions to change taxes or government spending to influence the economy. It can be expansionary or contractionary. Nondiscretionary fiscal policy is passive, or automatic, because changes in net tax revenues will occur without specific actions by Congress.

2. An increase in government spending that is equal to a cut in taxes will not have an equal effect on real GDP. To understand this point, assume that the MPC is .75, the increase in government spending is \$8 billion, and the decrease in taxes is \$8 billion. The multiplier would be 4 because it equals $1/(1 - .75)$. The increase in government spending will increase real GDP by \$32 billion ($\$8 \text{ billion} \times 4$). Of the \$8 billion decrease in taxes, however, one-quarter of it will be saved ($\$8 \text{ billion} \times .25 = \2 billion) and just three-quarters will be spent ($\$8 \text{ billion} \times .75 = \6 billion). Thus, the tax cut results in an increase in *initial spending* in the economy of \$6 billion, not \$8 billion as was the case with the increase in government spending. The tax cut effect on real GDP is \$24 billion ($\$6 \text{ billion} \times 4$), not \$32 billion.

3. Make sure you know the difference between a **budget deficit** (government spending greater than tax revenue for a year) and the **public debt** (the accumulation over time of budget deficits that are offset by any budget surpluses). These two terms are often confused.

4. The best way to gauge the size of budget deficits, the public debt, or interest on the public debt is to calculate each one as a *percentage of real GDP*. The absolute size of these three items is *not* a good indicator of whether it causes problems for the economy.

5. Try to understand the real rather than the imagined problems caused by the public debt. The debt will not cause the country to go bankrupt; nor will it be a burden on future generations.

■ IMPORTANT TERMS

fiscal policy	standardized budget
Council of Economic Advisers (CEA)	cyclical deficit
expansionary fiscal policy	political business cycle
budget deficit	crowding-out effect
contractionary fiscal policy	public debt
budget surplus	U.S. securities
built-in stabilizer	external public debt
	public investments

SELF-TEST

■ FILL-IN QUESTIONS

1. Policy actions taken by Congress designed to change government spending or taxation are (discretionary, non-discretionary) _____ fiscal policy, but when the policy takes effect automatically or independently of Congress, then it is _____ fiscal policy.
2. Expansionary fiscal policy is generally designed to (increase, decrease) _____ aggregate demand and thus _____ real GDP and employment in the economy. Contractionary fiscal policy is generally used to (increase, decrease) _____ aggregate demand and _____ thus real GDP to halt demand-pull inflation.
3. Expansionary fiscal policy can be achieved with an increase in (government spending, taxes) _____, a decrease in _____, or a combination of the two; contractionary fiscal policy can be achieved by a decrease in (government spending, taxes) _____, an increase in _____, or a combination of the two.
4. An increase of government spending of \$5 billion from an expansionary fiscal policy for an economy might ultimately produce an increase in real GDP of \$20 billion. This magnified effect occurs because of the (multiplier, crowding-out) _____ effect.
5. Net taxes equal taxes (plus, minus) _____ transfer payments and subsidies. (They are called "taxes" in this chapter.) In the United States, as GDP increases, tax revenues will (increase, decrease) _____, and as the GDP decreases, tax revenues will _____.

6. Because tax revenues are (directly, indirectly) _____ related to the GDP, the economy has some (artificial, built-in) _____ stability. If the GDP increases, then tax revenue will increase, and the budget surplus will (increase, decrease) _____, thus (stimulating, restraining) _____ the economy when it is needed. When GDP decreases, tax revenues decrease, and the budget deficit (increases, decreases) _____, thus (stimulating, restraining) _____ the economy when it is needed.
7. As GDP increases, the average tax rates will increase with a (progressive, proportional, regressive) _____ tax system, remain constant with a _____ tax system, and decrease with a _____ tax system. With a progressive tax system, there is (more, less) _____ built-in stability for the economy.

8. If there are growing deficits in the standardized budget, then the direction of fiscal policy is (contractionary, expansionary) _____ and if there are growing surpluses in the standardized budget, then fiscal policy is _____. A deficit produced by swings in the business cycle is (actual, cyclical) _____. When there is a cyclical deficit, the standardized budget deficit will be (greater, less) _____ than the actual budget deficit.

9. Current contributions for the Social Security system mean that tax revenues are (greater, less) _____ than benefit payouts to retirees. Contributions for Social Security, therefore, create a (deficit, surplus) _____ that (adds to, subtracts from) _____ the size of a Federal budget surplus.

10. There is a problem of timing in the use of discretionary fiscal policy because of the time between the beginning of a recession or inflation and awareness of it, or (an administrative, an operational, a recognition) _____ lag; the time needed for Congress to adjust fiscal policy, or _____ lag; and the time needed for fiscal policy to take effect, or _____ lag.

11. Political problems arise in the application of discretionary fiscal policy to stabilize the economy because government has (one, several) _____ economic goals, state and local fiscal policies may (reinforce, counter) _____

_____ Federal fiscal policy, and politicians may use fiscal policies in a way that creates (an international, a political) _____ business cycle.

12. Expectations among households and businesses that fiscal policy will be reversed in the future make fiscal policy _____

(more, less) _____ effective. For example, if taxpayers expect a tax cut to be temporary, they may save (more, less) _____ now to pay for a future increase in the tax rate and spend _____ now. As a result, consumption and aggregate demand (increase, decrease) _____.

13. When the Federal government employs an expansionary fiscal policy to increase real GDP and employment in the economy, it usually has a budget (surplus, deficit)

_____ and (lends, borrows) _____ in the money market. These actions may (raise, lower) _____ interest rates in the economy and (stimulate, crowd out) _____ private investment spending.

14. Current thinking on the advisability and effectiveness of discretionary fiscal policy shows general (agreement, disagreement) _____ about the value of fiscal policy in the short run, and general _____ about evaluating fiscal policy for its contribution to long-run productivity growth.

15. The public debt is equal to the sum of the Federal government's past budget (deficits, surpluses) _____ minus its budget _____.

a. Of the public debt, Federal government agencies and the Federal Reserve hold about (47, 53) _____ %, and commercial banks, financial institutions, state and local governments, and individuals and institutions here and abroad hold about _____ %.

b. Most of the public debt is (internal, external) _____ because foreigners hold only about (10, 25) _____ % of it.

c. The most meaningful way to measure the public debt is relative to (interest rates, GDP) _____.

d. Compared with the United States, the public debt as a percentage of GDP in Italy was (higher, lower) _____ and the public debt as a percentage of GDP in Poland was _____.

16. The possibility that the Federal government will go bankrupt is a false issue. It does not need to reduce its debt; it can retire maturing U.S. securities by (taxing, refinancing) _____ them. The government can also pay its debts by increasing (interest, tax) _____ rates.

17. If the public debt is held domestically, then for U.S. taxpayers it is (a liability, an asset) _____ and for U.S. citizens and institutions owning the U.S. debt securities, it is _____.

18. The public debt and the payment of interest on it may (increase, decrease) _____ income inequality in the economy and _____ the incentives to work, take risks, save, and invest in the economy. The public debt is a burden on an economy if it is held by (foreigners, U.S. citizens) _____.

19. A public debt imposes a burden on future generations if the borrowing done to finance an increase in government expenditures results in (an increase, a decrease) _____ in interest rates, _____ in investment spending, and _____ in the stock of capital goods for future generations.

20. The size of the burden from the crowding out of private investment is lessened if government expenditures are used to finance worthwhile (increases, decreases) _____ in physical and human capital that contribute to the productive capacity of the economy, or if they (encourage, discourage) _____ more private investment that complements the public investment.

TRUE-FALSE QUESTIONS

Circle T if the statement is true, F if it is false.

1. Discretionary fiscal policy is independent of Congress and left to the discretion of state and local governments. T F

2. Expansionary fiscal policy during a recession or depression will create a budget deficit or add to an existing budget deficit. T F

3. A decrease in taxes is one of the options that can be used to pursue a contractionary fiscal policy. T F

4. To increase initial consumption by a specific amount, government must reduce taxes by more than that amount because some of the tax cut will be saved by households. T F

5. A reduction in taxes and an increase in government spending would be characteristic of a contractionary fiscal policy. T F

6. Built-in stabilizers are not sufficiently strong to prevent recession or inflation, but they can reduce the severity of a recession or inflation. T F

7. The less progressive the tax system, the greater the economy's built-in stability. T F

8. The standardized budget indicates how much government must spend and tax if there is to be full employment in the economy. T F

9. The key to assessing discretionary fiscal policy is to observe the change in the standardized budget. T F

10. In the Federal budget, surpluses obtained from Social Security are treated as an offset to current government spending. T F

11. Recognition, administrative, and operational lags in the timing of Federal fiscal policy make fiscal policies more effective in reducing the rate of inflation and decreasing unemployment in the economy. T F

12. Economists who see evidence of a political business cycle argue that members of Congress tend to increase taxes and reduce expenditures before elections and to reduce taxes and increase expenditures after elections. T F

13. If households expect that a tax cut will be temporary, they are likely to spend more and save less, thus reinforcing the intended effect of the tax cut on aggregate demand. T F

14. State and local governments' fiscal policies have tended to assist and reinforce the efforts of the Federal government to counter recession and inflation. T F

15. The crowding-out effect occurs when an expansionary fiscal policy decreases the interest rate, increases investment spending, and strengthens fiscal policy. T F

16. The public debt is the total accumulation of the deficits, minus any surpluses, that the Federal government has incurred over time. T F

17. The public debt as a percentage of GDP is higher in the United States than in most other industrial nations. T F

18. Interest payments as a percentage of GDP reflect the level of taxation (average tax rate) required to service the public debt. T F

19. A large public debt will bankrupt the Federal government because it cannot refinance the debt or increase taxes to pay it. T F

20. The public debt is also a public credit. T F

21. The payment of interest on the public debt probably increases income inequality. T F

22. The additional taxes needed to pay the interest on the public debt increase incentives to work, save, invest, and bear risks. T F

23. Selling U.S. securities to foreigners to finance increased expenditures by the Federal government imposes a burden on future generations. T F

24. The crowding-out effect increases the investment-demand curve and investment in private capital goods. T F

25. If government spending is for public investments that increase the capital stock, then this spending can increase the future production capacity of the economy. T F

MULTIPLE-CHOICE QUESTIONS

Circle the letter that corresponds to the best answer.

1. Which combination of policies would be the most expansionary?

- (a) an increase in government spending and taxes
- (b) a decrease in government spending and taxes

- (c) an increase in government spending and a decrease in taxes
- (d) a decrease in government spending and an increase in taxes

2. An economy is in a recession and the government decides to increase spending by \$4 billion. The MPC is .8. What would be the full increase in real GDP from the change in government spending?

- (a) \$3.2 billion
- (b) \$4 billion
- (c) \$16 billion
- (d) \$20 billion

3. Which combination of fiscal policies would be the most contractionary?

- (a) an increase in government spending and taxes
- (b) a decrease in government spending and taxes
- (c) an increase in government spending and a decrease in taxes
- (d) a decrease in government spending and an increase in taxes

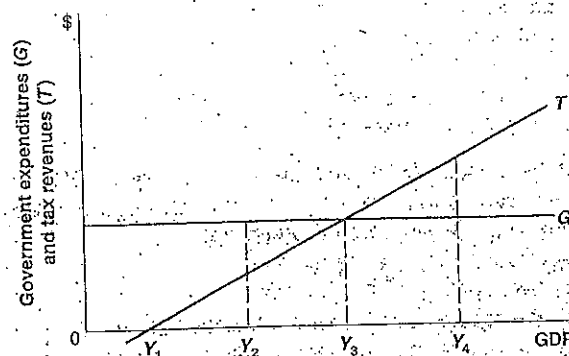
4. When government tax revenues change automatically and in a countercyclical direction over the course of the business cycle, this is an example of

- (a) the political business cycle
- (b) nondiscretionary fiscal policy
- (c) the standardized budget
- (d) crowding out

5. If the economy is to have built-in stability, when real GDP falls,

- (a) tax revenues and government transfer payments both should fall
- (b) tax revenues and government transfer payments both should rise
- (c) tax revenues should fall and government transfer payments should rise
- (d) tax revenues should rise and government transfer payments should fall

Answer Questions 6, 7, and 8 on the basis of the following diagram.



6. If the slope of the line T were steeper, there would be
- more built-in stability for the economy
 - less built-in stability for the economy
 - no change in the built-in stability for the economy
 - the need for more emphasis on discretionary fiscal policy

7. If the slope of the line T were flatter, there would be
- larger cyclical deficits produced as GDP moved from Y_3 to Y_2
 - smaller cyclical deficits produced as GDP moved from Y_3 to Y_2
 - larger standardized deficits produced as GDP moved from Y_3 to Y_2
 - smaller standardized deficits produced as GDP moved from Y_3 to Y_2

8. Actions by the Federal government to increase the progressivity of the tax system

- flatten the slope of line T and increase built-in stability
- flatten the slope of line T and decrease built-in stability
- steepen the slope of line T and increase built-in stability
- steepen the slope of line T and decrease built-in stability

Use the following table to answer question 9. The table shows the standardized budget deficit or surplus as a percentage of GDP over a five-year period.

Year	Deficit (-) Surplus (+)
1	-2.1%
2	-3.0
3	-1.5
4	+0.5
5	+1.0

9. In which year was fiscal policy expansionary?

- Year 2
 - Year 3
 - Year 4
 - Year 5
10. If the standardized budget shows a deficit of about \$200 billion and the actual budget shows a deficit of about \$250 billion over a several-year period, it can be concluded that there is a
- cyclical deficit
 - recognition lag
 - crowding-out effect
 - political business cycle

11. If the standardized deficit as a percentage of GDP is zero one year, and there is a standardized budget surplus the next year, it can be concluded that

- fiscal policy is expansionary
- fiscal policy is contractionary
- the federal government is borrowing money
- the federal government is lending money

12. If there is a surplus for the Social Security program in a given year, then this Social Security surplus will increase

- a Federal budget deficit that year
- a Federal budget surplus that year
- interest payments on the public debt
- holdings of U.S. securities by foreigners

13. The length of time involved for the fiscal action taken by Congress to affect output, employment, or the price level is referred to as the

- administrative lag
- operational lag
- recognition lag
- fiscal lag

14. The crowding-out effect of an expansionary (deficit) fiscal policy is the result of government borrowing in the money market which

- increases interest rates and net investment spending in the economy
- increases interest rates and decreases net investment spending
- decreases interest rates and increases net investment spending
- decreases interest rates and net investment spending

15. Current thinking about discretionary fiscal policy among mainstream economists is that it should be designed to

- counteract the effects of monetary policy
- contribute to long-run economic growth
- "fine-tune" the economy in the short run, but not in the long run
- control inflationary pressure, but not be used to fight recession

16. The public debt is the sum of all previous

- expenditures of the Federal government
- budget deficits of the Federal government
- budget deficits minus any budget surpluses of the Federal government
- budget surpluses less the current budget deficit of the Federal government

17. To place the public debt in perspective based on the wealth and productive capacity of the economy, it is more meaningful to

- examine its absolute size
- calculate the interest payments on the debt
- measure it relative to the gross domestic product
- compare it to imports, exports, and the trade deficit

18. According to many economists, the primary burden of the debt is the

- absolute size of the debt for the economy
- annual interest charges from bonds sold to finance the public debt
- deficit arising from a decline in exports and increase in imports
- government spending that the public debt finances for the economy

19. A major reason that a public debt cannot bankrupt the Federal government is because the Federal government has

- (a) an annually balanced budget
- (b) the Social Security trust fund
- (c) the power to levy taxes
- (d) a strong military defense

20. Incurring an internal debt to finance a war does not pass the cost of the war on to future generations because

- (a) the opportunity cost of the war was borne by the generation that fought it
- (b) the government need not pay interest on internally held debts
- (c) there is never a need for government to refinance the debt
- (d) wartime inflation reduces the relative size of the debt

21. Which would be a consequence of the retirement of the internally held (U.S.-owned) portion of the public debt?

- (a) a reduction in the nation's productive capacity
- (b) a reduction in the nation's standard of living
- (c) a redistribution of the nation's wealth among its citizens
- (d) a decrease in aggregate demand in the economy

22. Which is an important consequence of the public debt of the United States?

- (a) It decreases the need for U.S. securities.
- (b) It transfers a portion of the U.S. output to foreign nations.
- (c) It reduces the income inequality in the United States.
- (d) It leads to greater saving at every level of disposable income.

23. Greater interest charges on the public debt can lead to

- (a) fewer purchases of U.S. securities by foreigners
- (b) more private investment spending in the economy
- (c) lower taxes, and thus greater incentives to work and invest
- (d) higher taxes, and thus reduced incentives to work and invest

24. The crowding-out effect of borrowing to finance an increase in government expenditures

- (a) reduces current spending for private investment
- (b) increases the privately owned stock of real capital
- (c) reduces the economic burden on future generations
- (d) increases incentives to innovate

25. The crowding-out effect from government borrowing is reduced when

- (a) interest rates are rising
- (b) the economy is operating at full employment
- (c) government spending improves human capital in the economy
- (d) private investment spending can substitute for government spending

PROBLEMS

1. Columns 1 and 2 in the following table are an aggregate supply schedule. Columns 1 and 3 are aggregate demand schedules.

(1) Price level	(2) Real GDP ₁	(3) AD ₁	(4) AD ₂
220	\$2390	\$2100	\$2200
200	2390	2200	2340
190	2350	2250	2350
180	2300	2300	2400
160	2200	2400	2500

a. The equilibrium real GDP is \$_____ and the price level is _____.

b. Suppose that an expansionary fiscal policy increases aggregate demand from that shown in columns 1 and 3 to that shown in columns 1 and 4. The price level will increase to _____, and this rise in the price level will result in real GDP increasing to \$_____.

2. The following table shows seven real GDPs and the net tax revenues of government at each real GDP.

Real GDP	Net tax revenues	Government purchases	Government deficit/surplus
\$ 850	\$170	\$_____	\$_____
900	180	_____	_____
950	190	_____	_____
1000	200	_____	_____
1050	210	_____	_____
1100	220	_____	_____
1150	230	_____	_____

a. Looking at the two columns on the left side of the table, it can be seen that

(1) when real GDP increases by \$50, net tax revenues (increase, decrease) _____ by \$_____.

(2) when real GDP decreases by \$100, net tax revenues (increase, decrease) _____ by \$_____.

(3) the relationship between real GDP and net tax revenues is (direct, inverse) _____.

b. Assume the simple multiplier has a value of 10 and that investment spending in the economy decreases by \$10.

(1) If net tax revenues remained constant, the equilibrium real GDP would decrease by \$_____.

(2) But when real GDP decreases, net tax revenues also decrease, and this decrease in net tax revenues will tend to (increase, decrease) _____ the equilibrium real GDP.

(1) Real GDP	(2) Net tax revenue	(3) Average tax rate	(4) Net tax revenue	(5) Average tax rate	(6) Net tax revenue	(7) Average tax rate	(8) Government spending
\$1000	\$100	_____ %	\$100	_____ %	\$100	_____ %	\$120
1100	120	_____	110	_____	108	_____	120
1200	145	_____	120	_____	115	_____	120
1300	175	_____	130	_____	120	_____	120
1400	210	_____	140	_____	123	_____	120

(3) And, therefore, the decrease in real GDP brought about by the \$10 decrease in investment spending will

be (more, less) _____ than \$100.

(4) The direct relationship between net tax revenues and real GDP has (lessened, expanded) _____ the impact of the \$10 decrease in investment spending on real GDP.

c. Suppose the simple multiplier is also 10, and government wishes to increase the equilibrium real GDP by \$50.

(1) If net tax revenues remained constant, government would have to increase its purchases of goods and services by \$ _____.

(2) But when real GDP rises, net tax revenues also rise, and this rise in net tax revenues will tend to (increase, decrease) _____ the equilibrium real GDP.

(3) The effect, therefore, of the \$5 increase in government purchases will also be to increase the equilibrium real GDP by (more, less) _____ than \$50.

(4) The direct relationship between net tax revenues and real GDP has (lessened, expanded) _____ the effect of the \$5 increase in government purchases, and to raise the equilibrium real GDP by \$50, the government will have to increase its purchases by (more, less) _____ than \$5.

d. Imagine that the full-employment real GDP of the economy is \$1150 and that government purchases of goods and services are \$200.

(1) Complete the previous table by entering the government purchases and computing the budget deficit or surplus at each of the real GDPs. (Show a government deficit by placing a minus sign in front of the amount by which expenditures exceed net tax revenues.)

(2) The standardized surplus equals \$ _____.

(3) If the economy were in a recession and producing a real GDP of \$900, the budget would show a (surplus, deficit) _____ of \$ _____.

(4) This budget deficit or surplus makes it appear that government is pursuing (an expansionary, a contractionary) _____ fiscal policy, but this deficit or surplus is not the result of a countercyclical fiscal policy but the result of the _____.

(5) If government did not change its net tax rates, it could increase the equilibrium real GDP from \$900 to the full-employment real GDP of \$1150 by

increasing its purchases by (approximately) \$70. At the full-employment real GDP the budget would show a (surplus, deficit) _____ of

\$ _____.

(6) If government did not change its purchases, it would increase the equilibrium real GDP from \$900 to the full-employment real GDP of \$1150 by decreasing net tax revenues at all real GDPs by a lump sum of (approximately) \$80. The standardized budget would have a (surplus, deficit) _____ of \$ _____.

3. a. Complete the table at the top of the page by computing the average tax rates, given the net tax revenue data in columns 2, 4, and 6. Calculate the average tax rates in percentages to one decimal place (for example, 5.4%).

b. As real GDP increases in column 1, the average tax rate (increases, decreases, remains the same) _____ in column 3, _____ in

column 5, and _____ in column 7. The tax system is (progressive, proportional, regressive)

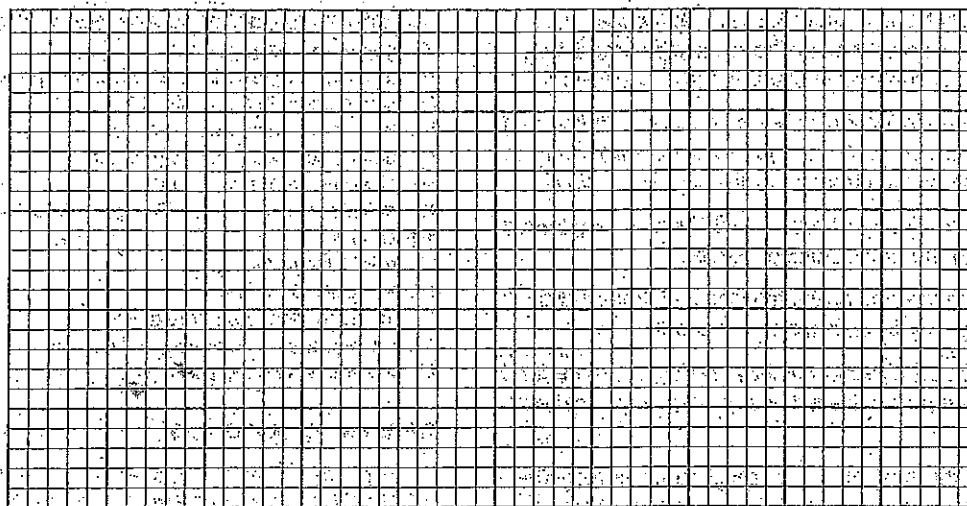
_____ in column 2, _____ in column 4, and _____ in column 6.

c. On the graph at the top of the next page, plot the real GDP, net tax revenue, and government spending data given in columns 1, 2, 4, 6, and 8. The tax revenue system with the steepest slope is found in column _____, and it is (progressive, proportional, regressive)

_____ while the one with the flattest slope is found in column _____, and it is _____.

4. a. Complete the table below by stating whether the direction of discretionary fiscal policy was contractionary (C), expansionary (E), or neither (N), given the hypothetical budget data for an economy.

(1) Year	(2) Actual budget deficit (-) or surplus (+)	(3) Standardized budget deficit (-) or surplus (+)	(4) Direction of fiscal policy
1	-\$170 billion	-\$130 billion	_____
2	- 120 billion	- 90 billion	_____
3	+ 40 billion	+ 20 billion	_____
4	- 60 billion	- 50 billion	_____
5	- 120 billion	- 100 billion	_____

Government expenditures, G , and
net tax revenues, T 

Real GDP

b. The best gauge of the direction of fiscal policy is the (actual, standardized) _____ budget deficit or surplus because it removes the (cyclical, actual) _____ component from the discussion of the budget situation.

c. (1) In what years were there cyclical deficits, and what was the amount of the cyclical deficit in each of those years?

(2) In what year was the actual budget surplus greater than the standardized budget surplus, and by what amount greater?

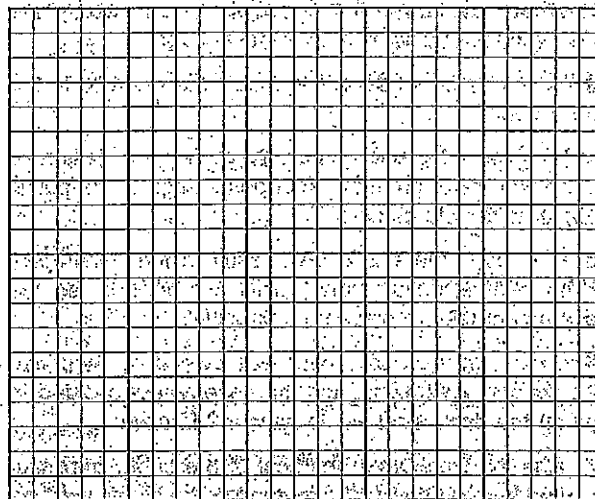
5. The following table gives data on interest rates and investment demand (in billions of dollars) in a hypothetical economy.

Interest rate	I_{d1}	I_{d2}
10%	\$250	\$300
8	300	350
6	350	400
4	400	450
2	450	500

a. Use the I_{d1} schedule. Assume that the government needs to finance a budget deficit and this public borrowing increases the interest rate from 4% to 6%. How much crowding out of private investment will occur?

b. Now assume that the deficit is used to improve the capital stock of the economy and that, as a consequence, the investment-demand schedule changes from I_{d1} to I_{d2} . At the same time, the interest rate rises from 4% to 6% as the government borrows money to finance the deficit. How much crowding out of private investment will occur in this case?

c. Graph the two investment-demand schedules on the next graph and show the difference between the two events. Put the interest rate on the vertical axis and the quantity of investment demanded on the horizontal axis.



SHORT ANSWER AND ESSAY QUESTIONS

1. What are the Federal government's three options for conducting either an expansionary fiscal policy or a contractionary fiscal policy?

2. Compare and contrast the effect of expansionary fiscal policy and of contractionary fiscal policy on aggregate demand, output, and the price level. Draw a graph to illustrate the likely effects of each. Assume that there is a ratchet effect.

3. What is the effect of the multiplier on the initial change in spending from fiscal policy? When the government wants to increase initial consumption by a specific amount, why must the government reduce taxes by more than that amount?

4. Explain the fiscal policies that would be advocated during a recession and during a period of inflation by those who (a) wish to expand the public sector and (b) wish to contract the size of government.

5. What is a built-in stabilizer? How do the built-in stabilizers work to reduce rises and falls in the level of nominal GDP?

6. Supply definitions of progressive, proportional, and regressive tax systems. What are the implications of each type of tax system for the built-in stability of the economy?

7. Explain the distinction between a cyclical deficit and a standardized deficit. Which type of deficit provides the best indication of the direction of fiscal policy? Why?

8. Discuss the history of recent U.S. fiscal policy based on changes in the standardized budget.

9. Explain the three kinds of time lags that make it difficult to use fiscal policy to stabilize the economy.

10. How might the direction of fiscal policy at the Federal level be countered by the actions of state and local governments?

11. Evaluate the strength of a crowding-out effect when the economy is in recession or experiencing a period of strong economic growth.

12. What is the current thinking about the advisability and effectiveness of discretionary fiscal policy?

13. How are budget deficits and surpluses related to the public debt?

14. Who owns the public debt? What percentage is held by the two major groups? What percentage of the public debt is held by foreigners?

15. Why can't the public debt result in the bankruptcy of the Federal government? What two actions can the government take to prevent bankruptcy?

16. If most of the public debt was owned by American citizens and institutions, and the government decided to pay off the debt, what would happen? Explain.

17. Was the increase in the cost of the public debt that resulted from World War II a burden borne by the wartime generation or future generations? Explain.

18. How does the public debt affect the distribution of income and incentives to work, to save, or to assume risk in the economy?

19. What are the economic implications of the portion of the public debt held by foreigners?

20. How does the public debt crowd out private investment and impose a burden on future generations? What two qualifications might lessen the crowding-out effect on the size of the economic burden that has shifted to future generations?

8. expansionary, contractionary, cyclical, less

9. greater, surplus, adds to

10. a recognition, an administrative, an operational

11. several, counter, a political

12. less, more, less, decrease

13. deficit, borrows, raise, crowd out

14. disagreement, agreement

15. deficits, surpluses; a. 53, 47; b. internal, 25; c. GDP; d. higher, lower

16. refinancing, tax

17. a liability, an asset

18. increase, decrease, foreigners

19. an increase, a decrease, a decrease

20. increases, encourage

TRUE-FALSE QUESTIONS

1. F, p. 608

10. T, p. 616

19. F, p. 620

2. T, p. 608

11. F, p. 617

20. T, p. 621

3. F, pp. 609, 611

12. F, p. 617

21. T, p. 621

4. T, p. 609

13. F, p. 617

22. F, pp. 621-622

5. F, pp. 609-611

14. F, p. 618

23. T, p. 622

6. T, pp. 611-612

15. F, p. 618

24. F, p. 622

7. F, pp. 612-613

16. T, p. 619

25. T, pp. 622, 624

8. F, p. 613

17. F, p. 620

9. T, pp. 613-615

18. T, p. 620

MULTIPLE-CHOICE QUESTIONS

1. c, pp. 608-609

10. a, p. 613

19. c, p. 621

2. d, pp. 608-609

11. b, pp. 614-614

20. a, p. 621

3. d, pp. 609-611

12. b, p. 616

21. c, p. 621

4. b, pp. 611-612

13. b, p. 617

22. b, p. 622

5. c, pp. 612-613

14. b, p. 618

23. d, pp. 621-622

6. a, pp. 612-613

15. b, p. 618

24. a, p. 622

7. b, pp. 612-613

16. c, p. 619

25. c, pp. 622, 624

8. c, pp. 612-613

17. c, p. 620

9. a, pp. 613-615

18. b, p. 620

PROBLEMS

1. a. 2,300, 180; b. 190, 2,350

2. a. increase, \$10, (2) decrease, \$20, (3) direct; b. (1) \$100, (2) increase, (3) less, (4) lessened; c. (1) \$5, (2) decrease, (3) less, (4) lessened, more; d. (1) government purchases are \$200 at all GDPs, government surplus or deficit: -30, -20, -10, 0, 10, 20, 30, (2) \$30, (3) deficit, \$20, (4) an expansionary, recession, (5) deficit, \$40, (6) deficit, \$50

3. a. column 3: 10.0, 10.9, 12.1, 13.5, 15.0; column 5: 10.0 at each GDP level; column 7: 10.0, 9.8, 9.6, 9.2, 8.8; b. increases, remains the same, decreases; progressive, proportional, regressive; c. 2, progressive, 6, regressive

4. a. (Year 1-2) contractionary, (Year 2-3) contractionary, (Year 3-4) expansionary, (Year 4-5) expansionary; b. standardized, cyclical; c. (1) year 1 (\$40 billion), year 2 (\$30 billion), year 4 (\$10 billion), year 5 (\$20 billion), (2) year 3 (\$20 billion)

5. a. \$50 billion; b. none; c. graph

SHORT ANSWER AND ESSAY QUESTIONS

1. pp. 608-611

8. pp. 614-615

15. p. 621

2. pp. 608-611

9. p. 617

16. p. 621

3. pp. 608-611

10. p. 618

17. p. 621

4. p. 611

11. p. 618

18. pp. 621-622

5. pp. 611-612

12. pp. 618-619

19. p. 622

6. pp. 612-613

13. p. 619

20. pp. 622, 624

7. pp. 613-614

14. pp. 619-620

ANSWERS

Chapter 30 Fiscal Policy, Deficits, and Debt

FILL-IN QUESTIONS

1. discretionary, nondiscretionary

2. increase, increase, decrease, decrease

3. government spending, taxes, government spending, taxes

4. multiplier

5. minus, increase, decrease

6. directly, built-in, increase, restraining, increases, stimulating

7. progressive, proportional, regressive, more